DOCUMENT RESUME

ED 403 479 CE 073 498

TITLE Learning Organization.
PUB DATE 96
NOTE 20p.; In: Academy of Human Resource Development (AHRD) Conference Proceedings (Minneapolis, MN, February 29-March 3, 1996); see CE 073 480.
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Adult Education; *Adult Learning; Change Strategies; *Cooperative Learning; Developed Nations; Foreign Countries; *Holistic Approach; *Labor Force Development; Models; Organizational Change; *Organizational Development; *Team Training; Teamwork
IDENTIFIERS Denmark; *Learning Organizations

ABSTRACT

This document consists of three papers presented at a symposium on the learning organization moderated by Roger Miller at the 1996 conference of the Academy of Human Resource Development (AHRD). "Creating a Learning Organization: A Case Study of Outcomes and Lessons Learned" (Laura L. Bierema, David M. Berdish) reports a study documenting the following results of implementing a learning organization at a division of Ford Motor Company: significant business performance; individual learning on personal, interpersonal, and professional levels; collective learning through discourse and relationship building; and organizational impact through application, self-directed learning, and systems thinking. These impediments are cited: management support, peer support, and resources. "Team Sensemaking: An Imperative for Individual and Organizational Learning" (Lisa Horvath et al.) develops a process model of team sensemaking through a review of the collective learning literature, in concert with preliminary findings from an exploratory study of an educational cohort. "The Subject and the Learning Organization" (Anders Vind) describes a Danish project that follows the implementation of organizational changes along with the principles of "the learning organization" in five cases. It looks especially at the consequences for the individual employee--what happens in the process and what the main barriers/supports are for real progress in the workplace. Papers contain references. (YLB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 403 479

SYMPOSIUM
[17] LEARNING ORGANIZATION

Chair: Roger Miller, University of Minnesota

Creating a Learning Organization: A Case Study of Outcomes and Lessons Learned

Laura L. Bierema, Washtenaw Community College
David M. Berdish, Electrical & Fuel Handling Division, Ford Motor Company

Team Sensemaking: An Imperative for Individual and Organizational Learning

Lisa Horvath, George Washington University
Jamie L. Callahan, George Washington University
Clyde Croswell, George Washington University
Gerri Mukri, George Washington University

The Subject and the Learning Organization

Anders Vind, University of Roskilde, Denmark

Academy of Human Resource Development
1996 Conference
Minneapolis, MN
February 29-March 3, 1996

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

✓ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

L Bierema
L Horvath, A Vind

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

BEST COPY AVAILABLE

CE 073 498

Creating a Learning Organization: A Case Study of Outcomes and Lessons Learned

Laura L. Bierema
Washtenaw Community College

David M. Berdish
Electrical & Fuel Handling Division, Ford Motor Company

This study documents the results of implementing a learning organization at the Electrical and Fuel Handling Division of Ford Motor Company. A qualitative case study approach was used. Findings indicate: significant business performance; individual learning on personal, interpersonal and professional levels; collective learning through discourse and relationship building; and organizational impact through application, self-directed learning, and systems thinking. Impediments include management support, peer support and resources. Implications of implementing a learning organization are also discussed.

Gaining a competitive edge through learning is a strategy being used by some organizations to enhance their standing in today's globally competitive business environment. Companies such as EDS, Shell, Hewlett-Packard, Harley-Davidson, Chrysler and others are becoming learning organizations to both increase innovation and improve performance. Becoming a learning organization involves adopting a holistic, systemic focus (Senge, 1990; Watkins and Marsick, 1993). It means becoming an organization that, "learns continuously and transforms itself" (Watkins and Marsick, 1993, p. 8). Although some companies have adopted the learning organization process, the outcomes, impact and challenges of such initiatives are not well-documented.

This article highlights a learning organization implementation case study of the Electrical & Fuel Handling Division (EFHD) of Ford Motor Company. EFHD is part of the automotive components industry, one of the largest industries in the world. EFHD supplies starters, alternators, wiper motors, injectors, fuel pumps, and throttle bodies to Ford and other automobile manufacturers. Chartered in 1988, EFHD originally managed facilities in Michigan and Indiana. Today, EFHD is a global business with 6,135 employees at facilities in Michigan, Indiana, Ireland, Great Britain, Hungary, China, Japan, and Mexico. The majority of the plants are unionized. 1994 sales and profits showed an unprecedented and dramatic turn around for the business. EFHD attributes a significant part of its resurgence and performance to becoming a learning organization.

Learning Organization: A Strategic Imperative

EFHD embraced Peter Senge's model from the 1990 book *The Fifth Discipline* as a framework for implementing the learning organization process. EFHD believes that the key to becoming a best-in-class, high performing organization lies in their ability to learn faster and more effectively than the competition. EFHD has designed plans to improve both work and interpersonal processes in this quest. EFHD's Vision states, "As a Learning Organization, we will generate a high level of customer satisfaction by providing subsystems, products, and services with best-in-class quality and best-in-class costs." EFHD's goal is to achieve maximum

© *copyright,Bierema & Berdish, 1996*

organizational performance through learning. Intended results include:

- Learn faster than the competition
- Achieve maximum value and zero waste
- Optimize knowledge *and* understanding
- Use energy to be a best-in-class producer (rather than fighting political battles)

EFHD's Strategic Initiative proposes, "To be an organization that fosters the five disciplines of the Learning Organization; specifically, Systems Thinking, Personal Mastery, Shared Vision, Team Learning, and Mental Models" (for definition of the disciplines see Senge, 1990). EFHD has worked to create an infrastructure supportive of learning. The infrastructure is designed to create and sustain the learning organization process and incorporates:

- Cultivating a supportive culture
- Promoting learning organization awareness
- Building capacity and involvement
- Adopting a community focus

Knowledge gives many U. S. companies leverage in competitive markets where total quality management is embraced and emphatically applied to analyzing problems and their causes. Quality tools such as problem solving models, root cause analyses, or statistical process control charts are revered as infallible management instruments. These analytical, linear tools, are an important part of the TQM movement. Yet for EFHD, these tools were inadequate to meet the goal of creating a learning organization able to understand and transform the organization's system. EFHD's goal of creating a learning organization was based on strengthening "soft skills" through developing true openness and understanding of assumptions that govern behaviors and beliefs about the organization and its members. Effort was also focused on cultivating open and honest communication among all employees. Of course, these goals needed to be pursued while embracing continuous improvement for the EFHD.

EFHD began the learning organization initiative in 1992 with the formation of the Product Launch Success Team, chartered to create high performance launch processes of new and current product lines. Simultaneously, the executive management (Division Operating Committee) began its efforts to create a culture based on team learning and shared vision. Although becoming a learning organization is a strategic imperative of EFHD, participation in the process is entirely voluntary. Today, there are 30 active team learning projects involving 1200 EFHD employees.

Becoming a learning organization at EFHD was a grass roots effort. The learning organization process existed for two years before a formal course to learn about the process was created. The course was developed out of employee demand to learn more about the process. The number one reason employees sought to become involved in the learning organization process was curiosity based on what they had observed and heard in the organization. One employee explains, "I think that if you can start one little group in the organization—if people can learn that working in a team is more fun and better for them personally, they will try it."

Research Questions

The purpose of this study was to understand the effects of implementing a learning organization at EFHD. Questions guiding the study included: 1) How do participants apply the theoretical concepts of a learning organization? and 2) What prevents the effective implementation of a learning organization process?

Methodology

A qualitative case study design was used to investigate the research question. Participants were a globally and hierarchically diverse sample of EFHD employees who voluntarily participated in a sixty-hour introductory course on the theory and practice of the learning organization. Data were collected through participant observation in both training and work settings, using semi-structured post-training interviews, written surveys, electronic mail, journals, and dialogue meetings. Field notes were taken during observations, and interview and dialogue sessions were tape-recorded and transcribed verbatim. Twenty-five employees participated in the interviews.

Data were analyzed using the constant-comparative technique. Data were organized into themes using systems dynamics tools (hexagon process and causal loops). Trustworthiness of the data was verified through the use of multiple data sources, member checks, and longitudinal data collection. EFHD employees also assisted in the data analysis process.

Results

EFHD's results are impressive. Key areas of performance improvement include: a dramatic financial turnaround between 1990-1994, improved employee attitude surveys, company leadership in achieving total productive maintenance checkpoints, and new product launches that exceed budget objectives in quality costs, and timing. The goal of the study was to probe beyond performance measures and understand results from a learning perspective. These results indicate that the nature of the learning was multifaceted. The learning will be examined on individual and collective levels, and the impact of both will be assessed in relationship to the EFHD organization. Impediments to becoming a learning organization will also be explored.

Individual Learning The scope of individual learning was evident on personal, interpersonal, and professional levels. Participants engaged in deeply reflective learning and transferred this learning to the work environment.

Personal Development. A consistent theme among participants was the improvement in personal mastery they experienced as a result of becoming involved in the learning organization. Personal mastery, one of the five disciplines, is the process of articulating and pursuing personal vision. Participants felt the process gave them a unique and safe opportunity to engage in self-assessment. One person remarked that, "[the process] seemed to be very suitable for me because I am in sort of a self-assessment role." The individual learning was also characterized by critical reflection, and in some instances life change. Participants spoke of being provoked to think in new ways and how their world view had been challenged. Before one participant became involved, he shared, "I didn't realize that there are a bunch of things that I don't like to face. . . . So now I look at how I view things. Because I need to also turn the situation around and see it from someone else's viewpoint." Other outcomes include seeing things differently as in this employee's experience, "I have been trying to walk in their shoes. Try[ing] not to get upset at others, and know that others have things on their minds and that [their behavior] might not be a true reflection of themselves." In one instance and engineer changed so dramatically that he was teased by his co-workers about becoming "soft."

Interpersonal Development. Participants also reported enhanced family relationships with examples ranging from improved marriages to smoother relationships with children. One employee noted, "I am trying to be more compatible with my family and look at their side instead of being so one-sided. I have never been willing to listen. I always make the conclusion beforehand." Benefits were also reported on a community level, for instance, one participant felt it enriched his ability to be a Cub Scout Leader.

Professional Development. Notably, participants felt that they had benefited more directly personally than professionally, but were quick to add that they believed their learning would transfer to the workplace. One participant observed, "We have to satisfy ourselves and feel that we are giving and getting something from the company." Another participant shared, "It has helped me a great deal in my personal life, and I think that when your personal life is a lot

BEST COPY AVAILABLE

sounder it will also help in your work environment." Some of the employees were surprised that EFHD would even encourage them to create vision and balance work and family life. One woman participant exclaimed, "This is not something you expect to get at work!" Another enthused, "I love these ideas because they apply at work and home." Another person reflected that, "Most of the things that I learned will help more as a person moreso than an employee." As with the philosophy of the learning organization, strong individuals make strong teams. One woman sums this up well, "Until we can see ourselves in the right light we cannot see anybody else 'cause I think it always starts with a personal thing until I can see me or see what I really am, I can't see what you are. So, I think if we start with self we can have a better impact on the whole."

Collective Learning Team learning flows out of individual learning, and is another discipline emphasized in the learning organization. Essentially, it is the ability to create meaning and knowledge collectively. It is not team building which focuses on interpersonal communications and building spirit, but rather a form of discourse that facilitates open dialogue and inquiry. Team learning does not demand a congenial, conflict-free process, but rather an openness to share world views (mental models) and appreciate the ideas of team members.

Development through Discourse. During the dialogue process the participants also seek common ground or a picture of where they want to go together, also known as the discipline of shared vision. Participants reported significant learning related to this aspect of the learning organization. One employee shared, "even with the many different people with different educational backgrounds we all worked well together." Another person commented, "We're all human, we want pretty much the same thing."

Workplace Community Development. Participants reported a new appreciation for the diversity of the team and tolerance of divergent viewpoints. There was more willingness and expectation to be honest. Feelings were recognized as valuable information for problem solving and creating as noted by one participant, "We are people with feelings and we have to deal with these. Our co-workers are not just people we work with, but they are people. We need to start understanding each other more. Work relationships improved in some cases, as the process is designed to minimize rank and positional status. Participants spoke about the blurring of hierarchical lines. One employee explains his experience in the learning organization course, "From the first moment I walked in, there seemed to be this invisible line, but then it went away." Another person observed, "Collective learning is good. I think that's the only way you're' going to be able to create a world class manufacturing plant is to learn together." Another employee discusses the barriers that characterize EFHD:

> Somehow we've gotten the idea that we are different [based on rank] and we have put up an imaginary boundary based on the demographics of the world. . . . we put up all these imaginary lines and the world is not like that. So we put up an imaginary line in the plant, salary and hourly. But, no one cares when I pay my house payment whether I'm hourly or salary. So, why should they have all these boundaries and imaginary lines? All they deep us from doing is what we really need to do to be productive.

In spite of initial barriers, the process has enhanced a sense of community among employees as noted by this individual, "I think as a group we recognized that we were a community and part of that is learning together" Another continued, "It was great to come together with different members of EFHD and leave feeling like a community."

Organizational Implications of Learning The organizational impact of becoming a learning organization ranged from applications such as the formation of teams and study groups to the use of tools and concepts. The participants also initiated self-directed learning projects related to the learning organization, and reported a new systemic awareness of the business and an understanding of their role in it.

Applications. A striking finding was that people actively applied the concepts and tools. Several official learning teams were established, such as the Product Launch Success Team, Total Productive Maintenance Team, Material Cost Reduction Team, and Division Operating Committee. In addition to formal task teams, learning teams were also formed with the sole purpose of practicing the concepts and tools in a safe arena. According to one participant,

> We've taken it to the next level already. We have two groups and we started to intermingle with management. And we started our own [learning] group. We are learning together and getting all our ideas and thoughts together to create something that works for all.

EFHD's development of a learning model also served as a framework to guide application (for learning model description, see Bierema & Berdish, In-Press). EFHD has also created visible reminders such as learning rooms, a learning library, and tools that reinforce the process.

The concept of sharing vision was referred to repeatedly as a key learning from the course. Simply recognizing that it was achievable and that similar values were shared was a breakthrough for many employees. Less tangible, though just as important was the willingness to take risks and sense of courage participants spoke of, as in this instance, "I am geeked and have more courage than I usually have and am ready to rock.." Participants applied the concepts beyond EFHD as in the example of this employee, "I find that some of the things I learned I brought to the board of directors at my church. I constantly zero-in on putting some of that into practice."

Self-Directed Learning. While the teams were busy applying the concepts collectively, several individuals initiated self-directed learning projects to enhance their understanding of and proficiently in the process. As one employee put it, "The more you get into it, the more you will understand and learn." Some employees began aggressive reading programs. One person kept a journal. Others learned how to facilitate and spent hours observing facilitation. Others volunteered to teach the course. Still others used the process to gain college credit as they took advantage of the educational assistance program benefit provided by Ford. Learning was also shared via the electronic mail system. Employees were motivated by a desire to use the tools ands get results. One person remarked, "I don't want to forget this and want to use this to make a difference."

Systems Perspective. Systems thinking, or a holistic perspective, is another of the five disciplines. Participants reported having a new outlook of the business after becoming involved in the learning organization. One learner exclaimed, "I can't believe the interconnections I'm experiencing. It is like learning a new word and then seeing it everywhere where you never saw it before." Employees indicated that the learning organization process helped them look at the whole picture, not just a part of the process. Employees also reported understanding their role in the system better as a result of participating in both the course and the process. One participant identified the high point as, "seeing the company and generally society work together and identify my place in the system. It's good to know what I do will be needed [and] helps me understand the big picture." The systems perspective extended beyond the company to the community. Participants sensed a better connection with the community and the whole system. One woman shared, "[Now,] when I make a decision I look at the whole picture and the ripples, not just the waves."

Impediments to Becoming a Learning Organization Although EFHD has made impressive strides in becoming a learning organization, impediments, or "speedbumps" as one team member termed it, still exist. As with any change, there are concerns about managerial support and a sense that if it fails, it will falter at the middle management area. There is also pressure among peers who either reject or do not understand the process. Finally, employees struggle with a shortage of resources, primarily time, to become proficient at using the new tools, processes and training available.

Management Support. Not surprisingly, management gets the blame when the implementation stalls. Participants crave fuller management support and fear the learning organization process will be abandoned. As one employee observes, "It is something that I think is very beneficial and needs to be backed by higher management. More than just the fact that the statement is made and the classes are good." A metaphor has evolved that refers to resistant managers and employees. They are called the organizational "clay" representing the impenetrable, hard layer in the organization that seems nearly impossible to change. Many dialogues revolve around the notion of "clay' and how to transform it. Another employee

observed, "My management supports it, but it still gets lost somewhere when you get on the job. Perhaps a little more management support that is sincere."

Peer Support. Some participants sensed they were all alone after attending the course and returning to their work area or team to find that no one spoke their new language or understood the vision. The results of this problem have ranged from resignation from the process to recruiting new members to join a learning team. There is also insecurity about applying new tools. To counter this fear, some participants have created learning groups to practice.

Resources. Resources are limited, and the demand for more literature, practice arenas and training has been unremitting. One employee emphasized, "We need to continue to nurture the skills that we learned." In response to the growing demand for resources, a week-long intensive course on the tools, theory and practice of the learning organization was created in conjunction with the local community college. Participants represent global and hierarchical diversity as they learn about the learning organization process.

Implications

What can be learned from EFHD's experience? EFHD has continuously learned as it has pioneered not only in Ford, but in manufacturing in becoming a learning organization. There are no models or recipes, so EFHD's lessons have helped structure their process that is so successful today. Astonishingly, participation is voluntary and after three years, over 1200 employees are actively participating on learning teams. What is the secret to their success? Causal loop analysis of the data for this study indicates that key leverage points lie in fostering individual and team learning and creating an infrastructure to support learning and practice. That boils down to the creation of an infrastructure that supports both learning and performance. EFHD has succeeded at fostering a wide scope of learning impact paralleling Senge's (1994) deep learning cycle which goes beyond developing new capacities to incorporate fundamental shifts in thinking on individual and collective levels.

The EFHD process has also helped employees see how they fit in the larger system, important according to Senge in his views on the community nature of the self (Senge, 1994, p. 26). Becoming a learning organization is a process that has been integrated with ongoing performance improvement initiatives, so rather than having the appearance of "the flavor of the month," the learning organization process has improved work teams, product launch programs, and total productive maintenance procedures. The EFHD experience also shows capacity to learn and change on personal, collective, organizational and community levels.

Fundamentally, EFHD has taken risks to create an architecture or infrastructure that supports learning. They have grounded their learning organization process in the Five Disciplines (Senge, 1990), they have created a model to guide and capture company learning, they have compiled several systems thinking tools to aid the process, and they have added dialogue to the discourse that previously included only discussion. Dialogue is used to continually reflect on how the process can be improved. EFHD also has learning teams, learning rooms, and learning libraries. Finally, EFHD's practice extends beyond the company to the community where EFHD has been instrumental in creating community learning groups oriented toward workforce development.

Conclusion

EFHD is a pioneer in its creation of a learning organization. Not only has the company achieved significant performance results by becoming a learning organization, it has also demonstrated that learning whether personal, collective, or organizational, has an impact on the organization and wider community. An employee captures the spirit of the learning organization at EFHD best:

> We are trying to pick back up the knowledge on the floor and the ability to share it [between hourly and engineers] and we lost it. Now we have a chance to regain it. It's a real tragedy. That's how we got so far behind in this economic race. We were on our way to becoming a service economy, not a manufacturing economy. We need to maintain our manufacturing excellence. The manufacturing excellence touches every life, I don't care what they do, it touches their life. And we in the automobile industry touches just about everybody. People don't even think about it. People think that it's just a part of living and if it goes, they can live without it. Well, they can't. That's false, that's false. We need this to keep America moving. My vision is to see EFHD have the best running equipment in all of Ford Motor Company.

References

Bierema, L. L., & Berdish, D. M. (In Press). Implementing the learning organization: A collaboration between business and education. In K. E. Watkins & V. Marsick (Eds.). In action: The learning organization.

Senge, P. (1990). *The fifth discipline: The art and practice of the learning organization.* New York: Currency Doubleday.

Senge, P., Ross, R., Smith, B., Roberts, C., & Kleiner, A. (1994). *The fifth discipline fieldbook.* New York: Currency Doubleday.

Watkins, K. E., & Marsick, V. J. (1993). *Sculpting the learning organization: Lessons in the art and science of systemic change.* San Francisco: Jossey-Bass.

Team Sensemaking: An Imperative for Individual and Organizational Learning

Lisa Horvath
The George Washington University

Jamie L. Callahan
The George Washington University

Clyde Croswell
The George Washington University

Gerri Mukri
The George Washington University

A process model of team sensemaking is developed through a review of the collective learning literature, in concert with preliminary findings from an exploratory study of an educational cohort. Team sensemaking is conceived as an embedded communicative process involving components of an organization that develops extant knowledge and creates collectively shared meaning. The paper concludes with implications of this model for practice and research in relation to the learning organization.

Those practicing in and studying organizations concur that the nature of our organizational environment is complex, global, and continually changing. There would also appear to be some agreement among this group that an organization's competitive advantage now revolves around its ability to explore and develop its internal strategies and characteristics (Kiernan, 1993; Ulrich & Lake, 1991). In other words, competitive advantage is incumbent on an organization's ability to acquire, use, and generate collective knowledge--in effect, learn. Organizational learning has become the imperative for anything and everything from organizational survival to the development of high performance work environments (Doz & Prahalad, 1991; Senge, 1990; Hamel & Prahalad, 1994). Though consensus has not been reached, researchers and practitioners alike have devoted a fair amount of effort in defining organizational learning and exploring its applicability (Huber, 1991). Relatively little work has examined how learning is developed on the collective level (Kim, 1993).

Through a review and critique of the collective learning literature, in concert with a longitudinal study of cohort learning in a university setting, we have developed a process model of learning that is presented in this paper. This communicative collective learning model builds on and expands the linkage model developed by Kim (1993) and the team learning models developed by Dechant, Marsick, and Kasl (1993), Marsick and Watkins (1992), and Brooks (1994) by integrating their work with our current knowledge on individual learning, intergroup relations, and sensemaking. Central to our model is the concept of team sensemaking which we see as *an embedded communicative process involving components of an organization that develops extant knowledge and creates collectively shared meaning.* The purpose of this paper is to examine the team-level dynamics related to learning which, implicitly, provide insight into the process of organizational learning.

Our model is grounded in living systems theory (Miller, 1978; Miller & Miller, 1991), postmodern social theory (Habermas, 1971; Giddens, 1979) and the interpretive paradigm (Weick, 1979). We view collectives such as organizations as both a system (von Bertallanfy, 1968; Katz & Kahn, 1978; Checkland, 1981; and Schwandt, 1994) and as an organism (Morgan, 1986). Following these metaphors, organizations located in industries (which are communities) within societies can be viewed as social systems constituted by components or groups comprised

© *copyright, Horvath, Callahan, Croswell, & Mukri, 1996*

of sub-components or individuals (people). In this lens, teams are simply socially constructed phenomena or linking mechanisms that integrate individuals and organizations. Combining this with an interpretive paradigm, collectives are comprised of shared systems of meaning where organization members continually make sense of and reinterpret events and actions (Gioia & Poole, 1984). Postmodern social theory expands our understanding of the interconnectedness of these components. According to this school of thought, collective behavior or actions are partly dependent on the mutual knowledge, interpretation, and sensemaking activities of the agents of the collective. Mutual and shared understanding and interpretation and creation of knowledge are the keys to individual and collective learning (Giddens, 1979). The integration of the assumptions intrinsic to these three theories sets the stage for the basic premise of our process model of learning. We believe that, at any level, learning is a collective endeavor that entails the non-rational (Riaffa, 1961; Levinthal & March, 1993) model of making sense of our actions and experiences.

This paper briefly reviews the literature on individual, group/team and organizational learning; sensemaking (Weick, 1995); and intra-team (Berg & Smith, 1987) and inter-team dynamics (Alderfer, 1987; Ancona & Caldwell, 1992). We then present our communicative collective learning model formulated around team sensemaking. We present preliminary findings of an exploratory longitudinal qualitative study that describes the individual and collective-level development of a master's cohort educational program.[1] Through periodic interviews, written documents, focus groups, and class observations we chronicle individual and collective development, learning, and action. Results from this study assist to verify and refine the communicative collective learning model.

The paper concludes with the major implications of this model for practice and research. For the research community, we delineate mechanisms and methodologies to study organizational and individual level learning. The practitioner is provided with guidelines to aid in the development of a context the promotes organizational learning.

Literature Review

To set the stage for our team sensemaking model, a brief review of the literature on learning in organizations, with special empahsis on team learning, is presented below. This is followed by a critique of collective learning theory by findings from the team dynamics literature.

Learning in Organizations The link between the conceptual topic of learning with the structural element of an organization is a widely discussed and increasingly studied phenomenon by organizational practitioners and researchers. Historically, interest in this link was primarily on the individual level, specifically relating to the acquisition of knowledge and skills (Hilgard & Bower, 1966); the organization was studied as a contextual element. For the past 20 years there has been an increased focus on the collective structure as an actor of adaptation and transformation. Researchers studying under the broad rubrics of organizational learning, collective knowledge acquisition, and the learning organization all have an interest in the process of collective acquisition of knowledge and its influence on long-term survival.

Although the major focus of interest in the link between learning and organizations has dramatically shifted from an individual to an organizational level of analysis, our definition of learning at both levels is identical. Researchers and practitioners alike have acknowledged that the process of organizational learning is fundamentally different; however, we have not been able to reflect that difference in our definitions or models of collective level learning (Hedberg, 1981;

---

[1] A cohort format is an educational delivery mechanism in which a group of students enter their studies together and experience the dynamics of the collective as they complete a series of common learning experiences over a defined period of time (Barnett & Caffarella, 1992).

Nonaka & Takeuchi, 1995). As Kim (1993, p.40) points out: *organizational learning has to resolve the dilemma of imparting intelligence and learning capabilities to a non-human entity without anthropomorphizing it.*

The work that examines the link between organizational and individual learning has given the most insight into the difference between the two processes. Kim's (1993) OADI-SMM model: observe, assess, design, implement - shared mental models, is the most sophisticated of these models that link individual and organizational learning together and delineate the differences between the two. In this model the transfer of learning between the individual and organization takes place through the exchange of individual and shared mental models. The model does not explicate how or where mental models are shared. However, other researchers (Senge, 1990; Watkins & Marsick, 1993; Brooks, 1994; Nonaka & Takeuchi, 1995) point out that the team structure is the site for the transfer of learning between the individual and the organization. Teams are the essential linking pin between individual and organizational learning. Recently, *team learning* has been spoken about as the mechanism of exchange.

Team Learning. The concept and process of team learning is a relatively unexplored area. A majority of the effort in this field has been concentrated on defining the term.[2] How teams learn is as yet not well defined. Most theorists agree that team learning implies interactions and exchanges between individuals--dialoguing (Dechant, Marsick & Kasl, 1993; Senge, 1990).

The research on team and group learning began with the literature on cooperative learning in the education field. This field was particularly interested in developmental relationships and their effect on student progression (Slavin, 1990). There is a renewed line of inquiry in this link in the literature--cohort learning (Barnett & Muse, 1993). Cohort learning is the concept of putting student together in similar learning experiences over a one or two year period. This literature still focuses on individual effectiveness, however, the collective level of engagement and shared outcome have begun to be explored.

The work on learning and knowledge acquisition on a team level has focused on phases of learning in project and task teams (Dechant, Marsick & Kasl, 1993); *anticipatory learning* (referring to learning for the future) (Sashkin & Franklin, 1993); power differences in team learning (Brooks, 1994); and the effect of deliberations on learning in product development teams (Purser, Pasmore & Tenaski, 1992).

As stated before there has been limited research conducted on team learning, however, the extensive work on team dynamics over the last fifty years sheds light into knowledge acquisition on a team level (Bettenhouse, 1991). Much of the research in group dynamics has spoken implicitly about the process and outcomes hypothesized to be associated with team learning, including the literature on boundary spanning and the transfer of technical information across team boundaries (Aldrich & Herker, 1977; Katz & Tushman, 1979; Allen 1984); intergroup coordination (Malone, 1987); political or persuasive action with external constituents (Pfeffer, 1981; Dean 1987); the engagement of vertical and horizontal communication (Ancona & Caldwell, 1992); and psychological and physical boundaries (Alderfer, 1976). For this paper we will concentrate on three areas that shed light into the role of teams in organizational learning: the work on external activities, performance and internal process (Ancona, 1990; Ancona & Caldwell, 1992); embedded inter-team dynamics (Alderfer & Smith, 1982); and organizational networks (Ibarra, 1993).

Group Dynamics Ancona and Caldwell (1992) found a complex relationship between external and internal processes. They looked at many types of groups' external activities,

---

[2] Team learning definitions utilized in the literature include the following components:
A continuous, strategically-used process that results in changes in knowledge, beliefs, and behaviors. Learning takes place through the ongoing dialectical process of action and reflection as a collective discipline involving mastering the practices of dialogue and discussion. These are enacted through changes in policies, procedures and systems (Dechant, Marsick, Kasl, 1993; Watkins & Marsick, 1993).

BEST COPY AVAILABLE

including *ambassador activity*, which focuses on influencing top management; *task coordinator activity*, which concentrates on coordinating work across organizations; and *scout activity*, which involves scanning for ideas and information across the organization. Most importantly they found that *scout activity* is negatively related to both internal task process and cohesiveness. Diffusion of knowledge is a necessary but not sufficient condition for organizational learning (Kim, 1993). Therefore groups or collectives that diffuse information may lack the internal capacity to engage in collective learning.

In addition, research has indicated subgroups (identity and task) have differing degrees of identification and involvement with the group (Alderfer, 1987). The literature on personal networks in organizations has complementary findings indicating that interaction networks are embedded in organization contexts which produce constraints on women and racial minorities which, in turn, cause their networks to differ from those of their white male counterparts in composition and relationship. Both these literatures indicate that knowledge acquisition in teams may occur for individuals yet may not occur for the total or even the majority of team members. The team learning literature has not conclusively indicated if all members need to engage in the acquisition of knowledge for a team to learn (Watkins & Marsick, 1990; Dechant, Marsick & Kasl, 1993; Watkins & Marsick, 1993).

Given these findings we suggest that a more appropriate linking mechanism from individual to organizational learning is team sensemaking: collectives interpret previous events to create reality with which they operate as fact (Weick, 1995). As individuals they need not accept this reality; however, they accept it in the collective endeavor.[3]

Model of Team Sensemaking. Maintaining the connection with living systems theory, this model can be visualized as the classic double helix (or DNA). As DNA is the building block of life, so communicative collective learning can be considered a building block for survival (Maturana & Varela, 1980). Intertwining strands of individual and collective learning form the backbone of our model. These strands are linked by team sensemaking which provides the unique identity of learning at all levels.

Exploratory Study

As we were conducting our literature review for our collective knowledge acquisition model we were also engaged in a two year exploratory study to examine the developmental relations which occur throughout a cohort experience Specifically, we were examining the exchanges and interactions over time with two or more people which result in personal or professional growth. We decided to do an in-depth qualitative study to understand the cohort experience, a popular education structure in management development programs and professional education and business schools.

The cohort consisted of 15 students in a two year weekend master's degree program in human resource development. Participation in the study was strictly voluntary. All fifteen cohort members agreed to have researchers observe their class sessions. Ten of the cohort members contracted to have additional data collected on them, including end of semester interviews, written class materials, questionnaires and group interviews.

Our analysis was open-ended with the rubric of developmental relationships. The semester interviews were semi-structured and began to demonstrate evidence of team sensemaking as integral to the process of collective learning. Throughout the data collection we conducted ongoing data analysis following a grounded theory framework (Glasser and Strauss, 1967). The cohort demonstrated evidence of collective learning by demonstrating insight into

---

[3] This paper specifies that team learning may be the link between individual and organizational learning in certain contexts. However, team sensemaking may capture the linking process in situations where team dynamics prohibit collective reflection and inquiry.

conceptual and process areas, and the performance of procedures, rules, and routines. Subgroups indicated an institutionalization of learning mechanisms, not knowledge acquisition related to the content area (Glynn, Milliken & Lant, 1991 p.7).

Implications

The team sensemaking model developed indicates that insights into organizational and individual level learning can be research through longitudinal narrative analysis of critical incidents (Martin, Feldman, Hatch, and Sitkin, 1983). The purpose of this methodology is to understand the interviewee's perspective on what the incident meant and how it relates to other experiences (McClure, 1989).

Narratives can be analyzed for similarities and differences between and among individuals and subgroups according to the structure, meaning, and emotion attached to the event and critical actors identified as most influential in determining the accepted collective understanding of a critical incident. For on-going analysis these patterns can then be correlated with:

- demographic data to determine group differences in collective sensemaking;
- organizational duration to determine the effect of length of interaction on the prevalence of collective sensemaking (Gioia and Chittipeddi, 1991); and
- performance to determine individual (or subgroup) acceptance of the collective paradigm and their performance in the collective (Bougon, Weick, & Binkhorst, 1977).

Practitioners have been interested in the development of contexts to promote collective learning experiences (Senge, Kleiner, Roberts, Ross & Smith, 1994). This review of literature and exploratory study indicate that sensemaking may be critical in organizational and individual learning. The extensive research completed on sensemaking gives direction into the mechanisms that encourage organizational members to possess a *mindset for sensemaking* (Weick, 1995 p.191). Some mindset development mechanisms explicated include: encouraging the use and sharing of members life stories and experiences, the search for and sharing of ideas and situations that fascinate, and the acceptance of meaning-making and understanding as an on-going process.

Team sensemaking may be the process which links individual and organizational learning. This article begins to reveal the potentiality of team sensemaking as a model for individual and organizational learning. The exploratory study currently underway marks an initial attempt to understand the process and highlight it for practical application and further research.

References

Alderfer, C.P. (1976). Boundary relations and organizational diagnosis. In M. Meltzer & F. Wickert (Eds.), Humanizing organizational behavior. Springfield, IL: Charles C. Thomas.

Alderfer, C.P. (1977). Group and intergroup relations. In J.R. Hackman & J.L. Suttle (eds.), Improving Life at Work. Santa Monica, CA: Goodyear.

Aldrich, H.E. & Herker, D. (1977). Boundary spanning roles and organization structure. Academy of Management Review, 2, 217-230.

Allen, T.J. (1984). Managing the flow of technology: Technology transfer and the dissemination of technological information within the R&D organization. Cambridge, MA: M.I.T. Press.

Ancona, D.G. (1990). Outward bound: Strategies for team survival in the organization. Academy of Management Journal, 33, 334-365.

Ancona, D.G. & Caldwell, D.F. (1992). Bridging the boundary: External activity and performance in organizational teams. Administrative Science Quarterly, 37, 634-665.

Barnett, B.G. & Caffarella, R.S. (October, 1992). The use of cohorts: A powerful way for addressing issues of diversity in preparation programs. Paper presented at the annual convention of the University Council for Educational Administration, Minneapolis, MN.

Barnett, B.G. & Muse, I.D. (1993). Cohort groups in educational administration: Promises and challenges. Journal of School Leadership, 3, 400-415.

Bougon, W.E., Weick, K.E., & Binkhorst, D. (1977). Cognition in organizations: An analysis of the Ultrecht Jazz Orchestra. Administrative Science Quarterly, 30, 350-372.

Brooks, A. (1994). Power and the production of knowledge: Collective team learning in work organizations. Human Resource Development Quarterly, 5(3), 213-235.

Checkland, P. (1981) Systems thinking, systems practice. Chichester: Wiley.

Dean, J.W., Jr. (1987). Deciding to innovate: Decision processes in the adoption of advanced technology. Cambridge, MA: Ballinger.

Dechant, K.E., Marsick, V.J., & Kasl (1993). Towards a model of team learning. Studies in Continuing Education, 15(1), 1-14.

Doz, Y.L. & Prahalad, C.K. (1991). Managing DMNCs: A search for a new paradigm. Strategic Management Journal, 12, 145-164.

Giddens, A. (1979). Central problems in social theory: Action, structure, and contradiction in social analysis. Berkeley, CA: University of California Press.

Gioia, D.A. & Chittipeddi, K. (1991). Sensemaking and sensegiving in strategic change initiation. Strategic Management Journal, 12, 433-448.

Gioia, D.A. & Poole, P.P. (1984). Scripts in organizational behavior. Academy of Management Review, 9(3), 449-459.

Glaser, B. & Strauss, A. (1967). The discovery of grounded theory. Chicago: Aldine.

Habermas, J. (1971). Knowledge and human interests. Boston, MA: Beacon.

Glynn, M.A., Milliken, F.J. & Lant, T.K. (1991). Organizational behavior: learning about organizational learning: A critical research agenda. Yale School of Organization and Management, Working Paper #88.

Hamel, G. & Prahalad, C.K. (1994). Competing for the future. Harvard Business Review, 72(4), 122-128.

Hedberg, B. (1981). How organizations learn and unlearn. P.C. Nystrom & W.H. Starbuck (Eds.), Handbook of Organizational Design. London: Oxford University Press.

Hilgard, E., & Bower, G., (1966). Theories of Learning. New York: Appleton-Century Crofts.

Huber, G. (1991). Organizational learning: The contributing processes and the literature. Organizational Science, 2(1), 88-115.

Ibarra, H. (1993). Personal network of women and minorities in management: A conceptual framework. Academy of Management Review,18(1), 56-87.

Katz, D. & Kahn, R.L. (1978). The social psychology of organizations. New York: Wiley.

Katz, R. & Tushman, M.L. (1979). Communication patterns, project performance, and task characteristics: An empirical evaluation and integration in an R&D setting. Organizational Behavior and Human Performance, 23, 139-162.

Kiernan, M.J. (1993). The new strategic architecture: Learning to compete in the twenty-first century. The Academy of Management Executive, 7(1), 7-21.

Kim, D.H. (1993). The link between individual and organizational learning. Sloan Management Review, Fall, 37-50.

Levinthal, D.A. & March, J.G. (1993). The myopia of learning. Strategic Management Journal, 14, 95-112.

Malone, T.W. (1987). Modeling coordination in organizations and markets. Management Science, 23, 1317-1332.

Marsick, V.J. & Watkins, K. (1992). Informal and incidental learning in the workplace. London: Routledge.

Martin, J., Feldman, M.S., Hatch, M.J., Sitkin, S.B. (1983). The uniqueness paradox in organizational stories. Administrative Science Quarterly, 28, 438-452.

Maturana, H.R.& Varela, F.G. (1980). Autopoiesis and cognition: The realization of the living. Dordrecht: Reidel.

McClure, G. (1989). Organizational culture as manifest in critical incidents: A case study of the Faculty of Agriculture, University of the West Indies. Unpublished doctoral dissertation, University of Minnesota, Minneapolis.

Miller, J.G. (1978). Living systems. New York: McGraw-Hill.

Miller, J.G. & Miller, J.L. (1991). A living systems analysis of organizational pathology. Behavioral Science, 36(4), 239-252.

Morgan, G. (1986). Images of organization. Newbury Park, CA: Sage.

Nonaka, I. & Takeuchi, H. (1995). The knowledge creating company. New York: Oxford University Press.

Pfeffer, J. (1981). Power in organizations. Marshfield: Pitman Publishing Co.

Purser, R.E., Pasmore, W.A. & Tenkasi, R.V. (1992). The influence of deliberations on learning in new product development teams. Journal of Engineering and Technology Management, 9(1), 1-28.

Riaffa, H. (1961). Decision analysis. Reading, MA: Addison Wesley.

Saskin, M. & Kiser, J.K. (1991). Total quality management. Seabrook MD: Ducichon.

Schwandt, D.R. (1994). Organizational learning: A dynamic integrative construct. Unpublished manuscript, The George Washington University.

Senge, P.M. (1990). The fifth discipline. New York: Doubleday Currency.

Senge, P., Kleiner, A., Roberts, C., Ross, R., & Smith, B. (1994). The fifth discipline fieldbook. New York: Doubleday Currency.

Slavin, R.E. (1990). Cooperative learning: Theory, research and practice. New Jersey: Prentice-Hall, Inc.

Smith, K. & Berg, D. (1987). Paradoxes of Group Life. San Francisco: Jossey-Bass.

Ulrich, D. & Lake, D. (1991). Organizational capability: Creating competitive advantage. The Academy of Management Executive, 5(1), 77-92.

von Bertallanfy, L. (1968). General system theory. New York: George Braziller.

Watkins, K.E. & Marsick, V.J. (1992). Towards a model of informal and incidental learning in organizations. International Journal of Lifelong Learning, 11(4), 287-300.

Weick, K.E. (1979). The social psychology of organizing. (2nd ed.). New York: McGraw Hill.

Weick, K.E. (1995). Sensemaking In Organizations. Thousand Oaks, CA: Sage Publications, Inc.

BEST COPY AVAILABLE

The Subject and the Learning Organization

Anders Vind
University of Roskilde, Denmark

The implementation of organizational changes along with the principles of "the learning organisation" has not been very well analysed. This Danish project follows the development in five cases and is especially looking at the consequences for the individual employee - what happens in the process, what are the main barriers/supports for real progress in the workplace?

"The learning organization" is a metaphorical attempt to grasp both the individual side and the organizational side of development in workplaces and companies. To get a better understanding of this it is essential to understand the individual and subjective side of the process.

The whole "theory" of the learning organization is very weak in its theoretical basis, and this weakness is very clear in the discussion of the relation between structure and individual/subject.

The project "KOLORIT" - Kompetency, learning organization and information technology - is dealing with this. The project draws upon critical theory, - primarily based in sociopsychology and psychoanalysis, and different theoretical approaches to organizational development. Theories that are capable of discussion the subject as a psychodynamic structure in the power and resistance relations (Knights and Willmot,) in the workplace. This forms a basis for a critical approach to the modern management concepts like "the learning organization" (without excluding the knowledge and insight about modern organizations, which also is embedded in these concepts).

The theoretical approach is combined with activities with living people - empirical research in companies. The project is action oriented, based on close links to a trade union that wants to have more practical advice on what their members have to do, to keep up with the development in the enterprises, and how to ensure the members personal interests in the process of modernisation.

Research Questions/Hypotheses

The theory will try to deal with changes in the workplace from the "learning process"-perspective - linking experiences, cognitive structure, environmental aspects, etc. to the actual process developing the individual and the "learning organization".

In the project we look in to these processes from the point of the subject, the individual employee, and follow this perspective in the process in the enterprises, as well in the research project.

Some of the questions that the project tries to deal with are

How do different personal/employee strategies interfere with the organizations/management strategies? We have a broad knowledge of the reasons for the organizations, the companies to seek new capacities, new knowledge, new forms of organization, etc. and to some degree also what types of management strategies that this is formed into - but we have very little knowledge about the structure and the content of the reasoning, reflexion by the individual employee and the "individual strategies" this is formed into. Following this we find it interesting to See how these different strategies interact in the actual practise in the workplace - how can this strategies support each other, how can they become contradictory, etc.?

How does the organizational environment - especially the use of technology and the work organization - influence on the personal development in the companies? Though we have a general understanding of some of the contemporary developments in organizations there still is many questions in the relation between the general technology- and management concepts and the specific response inside a given company. What are the main relations between specific possibilities in a technical and organizational sense and specific strategical choices made by management resp. employees?

Even though we have the subject as our primary point of focus there is still a very interesting aspect

© *Copyright, Anders Vind, 1996*

in the cooperation and in the actual group of employees, the colleges, in the workplace. There will very often be a very large element of collective practice in a workplace and how is this influenced by and how does this influence the development of the individual employee?

Research Method

The project consists of both a theoretical discussion about the literature and a field study in five companies.

The theoretical part will try to rethink and to some degree make a conglomerate of traditional sociological theories - for instance inspiration from Giddens (Giddens (1984)) and his theory of structuration - as a way to think employees as actors; of recent British industrial sociology based on Foucault theories of Power and Resistance - see for instance Knights and Vurdubakis (1994), and of theories of the subject and learning processes developed in the critical theory tradition (see among others .....).

With this as a theoretical basis we critically review some of the contemporary "theories" or "concepts" that are normally the frames of discussions of HRD-projects in Denmark. As part of this we have made a critical reading of Peter Senges work (...) and as an example of this kind of critical reading I have a summary of this critique later in this paper.

The empirical part of the project will be based on five case studies - based among others on the metho logical discussion of case studies by Yin (1993). The sample of cases has been made from different criteria:

It has to be manufacturing or companies servicing manufacturing companies because we think that the sector will have very heavy influence on the research questions raised in this project. We also want companies where the accessibility to he organization - both management and employees - is very good. And we want to look especially at non-academic technical and administrative staff. This is obviously based in the fact that our sponsor has this specific interest, but also in a point of view that different kind of employee will experience this questions very differently - based on their position in the company and the characteristics of their tasks, competencies, skills, etc.. This has lead to case studies in four Danish and one Greenlandic company.

The field studies will be based on three types of data: the "basic facts" (org. charts, procedures, etc.); interviews and observations in special departments in the companies (R&D, sales, or other white-collar areas).

Based on these data we are analysing the questions mentioned above. This will lead to the creation of a model of the process in the specific company. A model that will be discussed with the management and the employees in the company.

Finally we will compare and discuss the five cases in relation to the research questions.

A Critical Reading of Senge

But as an example of our approach to the area of the learning organization I have made a resume of our critical reading of Peter Senge. As mentioned this is not the only critical reading of contemporary "concepts" in HRD practices in Denmark, but probably the most interesting for an international audience. Peter Senges work on "the learning organization" has not been translated into Danish, but his concept as such in a very broad understanding has been imported - primarily thru consulting companies and a few books the refers to Senge.

The reading has resulted in two parts - a critique of some of Senges concepts from the Danish perspective, and an input to the design of the rest of the research project based on these reflexions. I won't go in details with the many specific ideas of different kinds by Peter Senge. But shortly recapture the conclusion: We see basically "The fifth discipline" as a big and idealistic enlightment-project. If we learn to think more and in a better way - with the fifth discipline - we will be able to solve and remove conflicts and obstacles to our development. The reflexion of the (very different) kinds of work as such is not part of the books, and it is a very abstract idea that all kinds of jobs give this enormous opportunities to the employees?

And some of the basic assumptions are generally very abstract and without substantial social

reference . Is this emphasis on the personal engagement in the work and the workplace realistic as a common feature - won't there be contradictions to the demand for flexibility, problems with all the mergers and acquisitions in the economy today, etc.? And there is a total lack of discussion about power and power relations - whether it's power based in economical structures, knowledge, organization or technology.

Senges descriptions about learning are very phenomenological and when they are linked to subjective structures it's primarily cognitive elements. But what is really going on in these processes - and how is this processes of learning supported or restricted by the power-structures as mentioned above?

What could be seen as Senges most original contribution - the focus on systems thinking and systems theory - is (interesting enough) the part that has had the least importance in a Danish context. In the Danish debate it has been an publication from the EU Commission (Stahl et al 1993) that has had most influence on how the "learning organization" has been interpreted. And that has mostly been from four key-aspects: - that companies should think employees and qualifications as strategical issues in the planning, - that informal learning and training should have more acknowledgement, - that we have to develop new form of cooperation between educational institutions and the workplaces, - and finally that we have to have an holistic approach to organizations.

Why is Senge interesting in a Danish context?

The work with Senges concepts of the fifth discipline is interesting and productive in more than one aspect:

First of all is it interesting as an ideology , a part of contemporary management culture. Senges very critical approach to actual aspects of traditional management; his focus on the human factor, the critique of pure economically and profit driven enterprises are an interesting influence on actual management debates. It is a very explicit and reflective example of the actual problems with legitimation of the present economic order (the liberal, market driven economy)

Secondly there is - maybe based in some common critical point of views - an interesting parallel to many of the ideas in the Scandinavian trade unions and their strategy of "the developing work". And I think Senge has a basic ethical standard - he operates on a clear and open basis, and he has a progressive view of the human side. If the consultants, that work on this basis, would live up to this standard they could do a really good job and be worth the trust by the employees. See the discussion of these aspects in management consultancy in Volmerg 1993.

Thirdly there is no doubt about the usefulness of some of the partial ideas, tools and solutions that Senge and based on Senge has been worked out. They can work in the actual workplace even they might not have a very explicit theoretical background

And final I think that Systems theory and its implementation on organizational process has to be discussed and research deeper. There are at least two dimensions in these further investigation into systems theory as I see it - is it an enlightening and pedagogical sound instrument for description of the workplace processes and/or is it "the real theory " - of independent, epistemological value?

In the further development of the KOLORIT-project we will go on with these questions in Senges work.

Discussion

I will briefly discuss some of the questions that the project has raised so far - through the critical readings and the planning of the empirical parts of the project:

There is a need for further developing the tools to describe the workplace as frame or room for individual development. The contributions from Bnche and Rummler 1990 and Swansson 1994 can be used in this context - as well as some of the elements from systems theory in Senge 1990. As mentioned I think that we generally should find out what the validity of systems theory is - can it for instance grasp some of the hidden structures that a long tradition of organizations based on a marketeconomy and the alienated work?

A central issue is to see how we can relate the subjective dynamics to the organizational dynamics. In the broad market of psychological theories as well as theories of personel development, it is very few

that relates specifically to this dynamics in organizations. And this dynamic has to be seen on the broader background of changes in socialization and the social relations in current society

How should we treat management questions - both relating to the actual management and to the perspectives of a more participatory and democratic development in the companies?

Conclusions:

Process of learning as central key in the development of the civilizational aspect of mode of production. In many ways you could say that Senges point is, that it is possible to find totally new ways of work and new forms of conscious - and that you can blow away some of the current restrictions in labour organization. Even that you might not share his optimism is this civilisationally aspect of the relation between subject learning and work interesting.

The KOLORIT-project will run until mid-1997, and the first results from the empirical studies wont be there before end 1996, so it's obviously to early to mention any conclusions or final results so far. But as an idea of a model to carry out research dealing with the subject in this kind of processes it has already proven it's value. As a core HRD-concept - to look at the subject and into the learning processes - and by that not only professionally to "Resources" and "Development", - it is also able to involve, understand and respect the "Human" part of HRD.

Referencer:

Brache, A.P. and Rummler, G.A. (1990):*Improving performance: How to manage the white space on the organization chart*. Jossey-Bass Publishers San Fransisco

Giddens, Anthony (1984): *The Constitution of Society*. Polity Press. Cambridge, UK

Knights, David and Vurdubakis, Theo (1994): Foucault, Power, Resistance and all that, in Jermier, John et.al. (1994): *Resistance and Power in Organizations*. Routledge. London

Kofman, Fred and Senge, Peter (1995): Communities of Commitment: The Heart of Learning Organizations in Chawla, Sarita and Renesch, John (ed.): *Learning Organizations. Developing Cultures for Tomorrow's Workplace*. Portland USA

Levitt, Barbara and March, James G. (1988): Organizational Learning in *Annual Reviews Sociology* 14:319-340

Senge, Peter (1994) : *Building Learning Infrastructures*. Audio from 1994 Systems thinking in Action Conference. Pegasus Communications Inc. Cambridge, USA

Senge, Peter (1990): The Fifth Discipline: *The Art & Practice of the Learning Organization*. Doubleday. New York.

Senge, Peter; Kleiner, Art; Roberts, Charlotte; Ross, Richard and Smith, Bryan (ed) (1994): *The fifth dimension fieldbook*. Doubleday NY

Stahl, Thomas; Nyhan, Barry og D'Aloja, Piera (1993): *The Learning Organisation. A Visin for Human Ressource development*.Eurotechnet. EEC Brussels

Swansson, Richard A.(1994):*Analysis for Improving Performance*. Berret-Koehler. San Fransisco

Volmerg, Birgit (1993): Unternehmenskultur - der neue Geist des Kapitalismus und seine sozialpsychologischen Folgen in Fricke, Werbner (ed): *Jahrbuch Arbeit + Technik 1993*, Bonn 1993

Yin, Robert K. (1993): *Applications of case study research*. Sage publications. London

BEST COPY AVAILABLE